

CLAIMS

- Sub
Ale
1. A floor having a floor covering and an opening in the floor, an access panel for access to cables, services or the like through the opening, the access panel including a floor frame located in the opening, a lid supported on the frame, the frame having a support flange extending around its periphery wherein the support flange extends between the floor covering and the floor.
 2. A floor as claimed in claim 1 wherein the flange provides a ramped edge.
 3. A floor as claimed in claim 1 wherein the flange is formed in two abutting parts from different materials.
 4. A frame for an access panel comprising a rigid structural element for supporting an outlet box or the like, the frame including a tapered outer edge or flange wherein the flange tapers substantially uniformly over a distance of at least 10, and preferably, 20 times the maximum thickness of the flange.
 5. A frame for an access panel comprising:-
a rigid structural frame, defining an outer edge; and
a tapered flange formed from a soft non structural material, typically a flexible polymeric material, abutting the outer edge.
 6. A frame as claimed in claim 5 wherein the flexible polymeric material is attached to and overlying the outer edge.
 7. A frame as claimed in claim 6 wherein the flexible polymeric material is separate from the outer edge and defines a step portion arranged to mate with a corresponding recess on the outer edge.
 8. A frame as claimed in claim 7 wherein the structural part of the frame is formed from a rigid high strength material.
 9. A frame as claimed in claim 8 wherein the high strength material is either an engineering grade plastic or a metal.
 10. A frame as claimed in claim 8 wherein the high strength material is a die cast metal, such as zinc or aluminium.
 11. A frame as claimed in any one of claims 5 to 10 wherein the flexible polymeric material is EVA, rubber modified polypropylene, or polyurethane.
 12. A frame as claimed in any one of claims 4 to 11 wherein the frame defines an upstanding rib which extends around a central aperture of the frame, which aperture is closable by a lid, the rib being disposed between the peripheral edge of the flange and the central aperture, and wherein the upstanding rib does not project above, and are preferably below, the load
- 20060220 093750Z
- 26
Ann.

Alb
Cont

bearing surface of the floor, the load bearing surface being the surface down to which the pile of the carpet of the floor crushes under normal usage loads.

13. A floor incorporating a frame as claimed in any one of claims 4 to 11 wherein the materials and construction of the frame and lid are such that the load bearing capacity of the frame and lid is substantially the same as that of the surrounding floor.

14. A frame as claimed in claim 12 or 13 wherein the lid comprises a rigid structural panel having a flexible overmoulding.

15. A frame as claimed in claim 14 wherein the rigid panel is a steel plate, a die casting or an injection moulded polymer.

16. A frame as claimed in claim 14 or 15 wherein the flexible overmoulding is polyurethane or a rubber modified polypropylene.

17. A frame as claimed in any one of claims 4 to 16 wherein the frame is rectangular and defines a pivot surface extending parallel to and spaced inwardly from an inner edge of the frame which inner edge abuts the floor deck and defines the aperture.

18. A frame as claimed in claim 17 wherein the underside of the lid defines a bearing surface which is adapted to slidably engage on the pivot surface to allow the lid to bear on and pivot about the pivot surface.

19. An access panel for insertion into an aperture in a floor, wall, desktop or like barrier, the access panel including:

a frame adapted to be connected in the aperture in the barrier,

a lid positioned within the frame and pivotably movable relative to the frame between a lid open position and a lid closed position,

a hatch pivotably connected to the lid and movable between a hatch open position in which there is an opening in the lid through which cable services may extend and a hatch closed position in which there is no such opening.

the access panel being characterised in that locking means are provided between the hatch and the frame such that when the lid is in the lid closed position the hatch will be locked against movement between the hatch open position and the hatch closed position irrespective of which of those positions it is in initially.

20. A lid for an outlet for cable services through a barrier such as a floor, wall or the like, adapted to be seated on or closely adjacent a surface of the barrier and in communication with an opening therethrough, the lid

Alb
Cont

including a hatch pivotally connected to the lid and moveable between an open position in which there is an aperture in the lid through which cable services may extend and a closed position in which there is no such aperture characterised in that when the lid is latched and the hatch is open, neither
5 the lid or the hatch can be raised from a predetermined position by movement of cable.

21. A lid for an outlet for cable services through a barrier such as a floor, wall or the like, adapted to be seated on or closely adjacent a surface of the barrier and in communication with a hole therethrough, the lid comprising a
10 rigid panel formed from a structural material, such as metal or engineering grade polymer and an overmoulding formed from a flexible polymeric material, the overmoulding defining at least one hatch.

22. A lid for an outlet for cable services as claimed in claim 21 wherein the lid and hatch are joined together by an integral hinge.

15 23. An access panel for accessing cable surfaces through a barrier such as a floor, wall or the like, the access panel having a frame and a lid wherein the frame defines a first arcuate bearing surface which is shaped and configured so as to define a hinge surface supported away from a wall of the frame and wherein the lid defines a second bearing surface which is correspondingly
20 arcuate, the lid being provided with detent means adjacent the second bearing surface, the first and second bearing surfaces being shaped and configured such that in use the second bearing surface is arranged to bear on the first bearing surface to form an open hinge element, relative movement of the second bearing surface about the first bearing surface allowing the lid to
25 rotate relative to the frame, characterised in that when the lid is closed the detents engage underneath the frame providing the first bearing surface and prevent the one end of the lid adjacent that bearing surface from being raised vertically upwardly relative to the frame

24. An access panel as claimed in claim 23 wherein a further second
30 bearing surface is defined at an opposite end of the frame and a latch on the lid is engageable underneath the second bearing surface.

25. An access panel as claimed in claim 24 wherein the latch includes one or more C-shaped projections which engage underneath the second bearing surface, the geometry of the arrangement being such that pressure on the
35 underside of the lid tends to force the latch to close more tightly.

26. An access panel as claimed in claim 24 or 25 wherein the bearing elements are symmetrically arranged such that the lid can be turned around by 180° with either bearing element acting as the fulcrum for the hinge.

5 27. An access panel as claimed in claim 26 wherein two further bearing elements are provided.

28. An access panel as claimed in any one of claims 23 to 27 characterised in that a closed channel is formed extending along and around one or more inner edges of the frame.

10 29. An access panel for insertion into an aperture in a floor, wall or the like, wherein the frame defines an aperture around which an upstanding rib extends, wherein the edges of the rib are chamfered and wherein the edges of the lid for the access panel are formed from a flexible material and are also chamfered to provide a substantially waterproof sealing fit between the lid and the upstanding rib.

15 30. An access panel for insertion into an aperture in a floor, desktop or the like, the access panel including a floor frame defining a square or rectangular aperture and wherein a closed well or trough is defined extending continuously along the four sides of the aperture.

20 31. An access panel for cable services or the like comprising:
a frame;
a lid adapted to close the frame;
the lid including a latch pivotally connected to the lid, a hatch movable between an open position in which there is an aperture in the lid for which cable services may extend and a closed position in which there is no aperture, the lid being characterised in that the latch is supported in the open position between two or more pillars which have curved inner faces so as to define an expanding trumpet-shaped aperture for cables extending through the hatch and outside of the panel.

30 32. An access panel as claimed in claim 31 wherein the sides of the lid of the lid are tapered inwards to facilitate closure against the carpet frame and also to sweep aside the carpet.

33. An access panel as claimed in claim 32 wherein the edge of the lid has a slope of 30 to 45 degrees.

35 34. A lid for an outlet for cable services through a barrier such as a floor, wall or the like, adapted to be seated in a frame located in the outlet and adapted to be moved between a lid open position and a lid closed position,

the lid including a latch for locking the lid in the lid closed position within the frame, wherein the latch is moveable between, and is stable in each of, a latch open position and a latch closed position, the latch defining a contact surface which, as the lid is moved towards the lid closed position contacts the frame to initially pivot the latch towards the latch open position and to subsequently, as the lid is moved further towards the lid closed position, pivot the latch towards the latch closed position to effect the locking of the lid in the lid closed position.

35. A lid as claimed in claim 34 wherein the contact surface of the latch includes a lead in surface which is angled to push the latch inwards on contact with the frame and a second upper surface which is generally parallel to the side of the frame.

36. A lid for an outlet for cable services through a barrier such as a floor, wall or the like, adapted to be seated on or closely adjacent a surface of a barrier and in communication with a hole therethrough, the lid comprising a rigid panel formed from a structural material such as metal or engineering grade polymer and a hatch which is mounted to the lid in such a manner that the hinge is pivotable about an axis which is located outside of the plane of the lid and on a side thereof which, in use, is distal to the surface of the barrier.

37. A lid as claimed in claim 36 wherein the pivot axis is located above the load bearing surface of the lid.

Add
A7
Cont. add
B6